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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/605,213 | 06/28/2000 | Norbert Rahn | P00,1268 | 6581 |

7590

10/23/2002

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EXAMINER

MANTIS MERCADER, ELENI M

ART UNIT

PAPER NUMBER

3737

DATE MAILED: 10/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/605,213

Applicant(s)

RAHN ET AL.

32

Examin r

Eleni Mantis Mercader

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-- **Th MAILING DATE of this communication appears on th cover sheet with the correspondence address --**
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2002 .
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

FINAL ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Arguments

2. Applicant's arguments with respect to claims 2-30 have been considered but are moot in view of the new ground(s) of rejection. The limitations added regarding a mixing unit connected to the imaging unit for mixing a representation of the tip into the image, constitutes new grounds for rejection and also identification of a flexible tip of an instrument also constitutes new grounds for rejection. Please note that claim 15, has not been entered by our clerical section because it was not requested to be added instead it was requested to be substituting claim 1. Please re-submit with your next office action along with any amendments requesting to add the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paltieli'029 in view of Ferre et al.'980.

Paltieli'029 teaches all the features of the instant invention including: a system, a medical workstation, and a method comprising:

an image acquisition unit for acquiring image signals of a first subject an imaging unit for producing an image of the first subject from the image signals (see Figure 1, element 28, col. 6, lines 20-28);

a navigation system including a position acquisition system for determining a position of said image signal acquisition unit (see Figure 1, element 20; and col. 6, lines 29-40) and for determining a position of a second subject relative to said image acquisition unit (see Figure 1, element 32; and col. 6, lines 40-57);

a mixing unit for mixing a representation of said second subject into said image of said first subject (col. 7, lines 42-67 and col. 8, lines 1-63; also see Figures 7-10).

Paltieli'029 teaches a navigation system including identifiers, selected from the group consisting of detectable marks and position sensors, which are respectively attachable to said image signal acquisition unit and to said second subject and which are identifiable as to position by said position acquisition unit (see Figures 1 and 4; in Figure 4, elements 60 and 62; also see col. 6, lines 66-67 and col. 7, lines 1-18).

Paltieli'029 teaches the image signal acquisition unit which comprises an ultrasound probe (Figure 1, element 28; col. 6, lines 23-27).

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Paltieli'029 teaches the image signal acquisition unit comprising an X-ray source and an X-ray receiver (see Figure 2, elements 42 and 40; and col. 6, lines 58-65).

Paltieli'029 teaches the imaging unit producing a 3D image of said first subject from said image signals (col. 8, lines 32-63).

Paltieli'029 teaches the imaging unit producing a 2D image of said first subject from said image signals (col. 8, lines 20-31) and wherein the mixing unit mixes an indication of a distance of the second subject from the image plane into the 2D image (see Figures 7-10; in Figure 8 see screen 106, indicating needle 92 on ultrasound image 108; also see col. 8, lines 11-32).

Paltieli'029 teaches the position acquisition unit simultaneously identifies the position of said image signal acquisition unit and the position of the second subject (see Figures 4 and 7; and col. 6, lines 66-67 and col. 7, lines 1-67).

Paltieli'029 teaches an acceptance device for the first subject and wherein the position acquisition device identifies a position of the acceptance device simultaneously with identifying the position of the image signal acquisition unit and the position of the second subject (the verification computer unit constitutes such a device for verifying needle insertion based on positions of the subject based on the ultrasound image and the target; see col. 9, lines 46-63).

Paltieli'029 teaches all the features of the instant invention as indicated above, except for the use of a support device for supporting the patient.

It would have been obvious to one skilled in the art at the time that the invention was made that the patient is supported during an interventional procedure, as this is the common practice of skilled artisans.

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Paltieli'029 do not teach a mixing unit connected to the imaging unit for mixing a representation of the tip into the image and nor do they teach identification of a flexible tip of an instrument into the image. In the same field of endeavor, Ferre et al.'980 teach in stereotactic systems utilization of a mixing unit for creating a composite image of the location of the tip as well as the tube of an instrument (see col. 5, lines 9-27) and utilization of such unit with flexible instruments (see col. 5, lines 28-42). It would have been obvious to one skilled in the art at the time that the invention was made to have modified Paltieli'029 and incorporated the teaching of Ferre et al.'980 to allow for better position monitoring of the instrument while in surgery.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni Mantis Mercader whose telephone number is 703 308-0899. The examiner can normally be reached on Mon.-Frid. 8:00 AM- 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on 703 308-7635. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308-0758 for regular communications and 703 308-0758 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0858.



Marvin M. Lateef
Supervisory Patent Examiner
Group 3700

EMM
October 19, 2002